with facility as trade varies in direction, or increaſes in quantity: thus a canal may commence, like a man, on a ſmall capital, and riſe to conſequence out of its own earnings.

As the machine is reduced in expence, the quantity which it will perform is alſo contracted: in the deſcending trade about nine hundred tons will be the work of twelve hours.

CHAP. VII.

OF THE SYSTEM OF NAVIGATING.

AS a plane will riſe from fifty to two hundred feet at one time, conſequently, the ponds of canal may be longer, without interruption, than on the lock principle; and as men will be ſtationed at each machine, whoſe buſineſs it muſt be to paſs the boats at ſo much *per* ton *, I conceive the beſt mode of navigating will be, when a man arrives with his ten, or more, boats at a plane he ſhould immediately leave them for the men to transfer, and, taking ſuch boats as are ready, return to the ſource or machine from whence he came.

When the boats have been paſſed by the engine-men, they are navigated by a man to the next machine, and ſo on, till the voyage is completed. In a trade of lime-ſtone, coals, iron-ore, ſlate, flags, deals, and various other articles, it could not make the leaſt difference, in ſuch materials, if a boat remained a few hours at a plane waiting for transfer; but in caſe of the arrival of merchandize, it ſhould be paſſed immediately, leaving the other boats for that purpoſe.

By this mode the ſame boatman will not navigate the whole line of canal, but will always work on one pond; which I conceive to

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* On the Ketley and Shropſhire canals, a five-ton boat is paſſed at a plane for 3d. the empty boats return *gratis*.